REMARKS/ARGUMENTS

Claims 2 and 3 are pending in the application and stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bredt et al. (2001/0050031). The rejection is premised on the Examiner's contention that the particles disclosed in Bredt et al. contain cavities as recited in Applicant's claims. Referring to page 4, ¶[0039] of the reference, the Examiner states that, after the "activating fluid is delivered to the said particulate mixture, the fluid . . . infiltrates the less-soluble and slightly porous particles (wherein the particles that are used contain at least one cavity . . .) ". Office action, pages 2-3. Applicant respectfully traverses the rejection and requests reconsideration.

The Examiner is correct that Bredt et al. discloses infiltration of particles with a fluid, but is wrong to assert that the particles contain cavities. To the contrary, the "slight porosity" in the powdered material disclosed by Bredt et al. is due to nothing more than the interstitial spaces between adjacent particle grains that comprise the powder –it is not due to cavities within the grains themselves. This is abundantly clear from ¶¶[0051] and [0055] of the reference:

> . . . The filler particles can include a distribution of particle grain sizes . . . Large grain sizes appear to improve the final article quality by forming large pores in the powder through which the fluid can migrate rapidly, permitting production of a more homogeneous material. Smaller grain sizes serve to reinforce article strength.

Bredt et al., ¶[0051].

> . . . The final strength of the finished article depends largely on the quality of the adhesive contacts between particles of the mixture, and the size of the empty pores that persist in the material after the adhesive has hardened; both of these factors vary with the grain size of the particulate material. . . .

Bredt et al., ¶[0055].

In short, the pores disclosed in Bredt et al. are a function of grain size, not cavities within the particles themselves. To the extent that the Examiner contends that cavities are inherent in

the particulate filler of Bredt et al., Applicant respectfully disagrees. "Inherent anticipation requires that the missing descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art." Trintec Indus., Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295 (Fed. Cir. 2002) (quoting In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999)). See also Cont'l Can Co. USA, Inc. v. Monsanto Co., 948 F.2d 1264, 1269 (Fed. Cir. 1991) (quoting In re Oelrich, 666 F.2d 578, 581 (CCPA 1981) "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.").

One of the advantages of the present invention is that, by using particles containing cavities, the finished article is less dense than it would be in the absence of the cavities. In the method taught by Bredt et al., however, this advantage is not realized, as the pores between adjacent grains are (mostly) filled up by in the infiltrating adhesive fluid. The result is a much denser, and hence, heavier, article.

Accordingly, claim 2 in the application is not anticipated by Bredt et al., as the reference does not disclose the use of particles containing cavities. Similarly, claim 3 is not anticipated by the reference. Claim 3 recites: "The method according to claim 2, wherein the particles are irradiated* such that the cavities are essentially preserved." On page 3 of the Office action, the Examiner asserts that the "pores of the particles [disclosed by Bredt et al.] will inherently be preserved after solidification or curing by the radiation from the ultraviolet." However, the "pores" taught by Bredt et al. are merely interstitial spaces between adjacent grains of the particulate filler; they are not cavities in the grains themselves. Thus, whether they are preserved or not, they do not satisfy the limitation of claim 3. In fact, though, they are mostly not preserved, as they become filled up with infiltrating fluid and the formation of a hardened adhesive matrix. See Bredt et al., at ¶[0009]: ". . . The fluid activates the adhesive, and the activated adhesive causes the particles to adhere together in an essentially solid layer. . . ."

* Per claim 1, the word "irradiated" refers to either "irradiation with a beam of energy or a jet of liquid."

Applicant respectfully requests a Notice of allowance. If there are any remaining issues that need to be addressed, the Examiner is invited to telephone the undersigned attorney directly.

Respectfully submitted,

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